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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/931,308      | 08/16/2001  | Alexander E. Mericas | AUS920010547US1     | 3191             |

7590 11/06/2003

Mark D. Simpson  
Synnestvedt & Lechner  
2600 Aramark Tower  
1101 Market Street  
Philadelphia, PA 19107-2950

EXAMINER

WEST, JEFFREY R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2857

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                                       |           |
|------------------------------|-------------------------------|---------------------------------------|-----------|
| <b>Office Action Summary</b> | Application No.<br>09/931,308 | Applicant(s)<br>MERICAS, ALEXANDER E. |           |
|                              | Examiner<br>Jeffrey R. West   | Art Unit<br>2857                      | <i>Aw</i> |

-- **Th MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2001 .
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Pri rity under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____                                     |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5 and 8-17, drawn to a method, or corresponding system and code for carrying out the method, for monitoring occurrences of events related to operation of a processor, classified in class 702, subclass 186.
- II. Claims 6 and 7, drawn to a performance monitor, classified in class 714, subclass 39.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method of group I can be practiced by one of a plurality of different apparatus such as a software program or simple counter arrangement.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Mr. Mark McBurney on October 27, 2003, a provisional election was made without traverse to prosecute the invention of group I, claims 1-5 and 8-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6 and 7 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Drawings***

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "42" and "81". A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because of the following informalities:

Figure 1 contains an unknown symbol above reference number "28".

In Figure 2, the "performance monitor" is labeled "250" instead of "50" as it is in the specification on page 6, line 18.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

7. Claim 5 is objected to because of the following informalities:

In claim 5, "in claim 2,," should be ---in claim 2,---.

In claim 15, "by said dividing ," should be ---by said dividing,---.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3, 10, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 10, and 15 recite a limitation for "assigning one additional counting element, equal in number to any remainder left over. . . , to as many of said events to be counted as possible." This limitation is considered to be vague and indefinite for the following reasons.

First, it is unclear to one having ordinary skill in the art how "one additional counting element" can be "equal in number to any remainder left over." Written in this manner, "equal in number" is further limiting the "counting element" but it is unclear how the counting element, which has no associated number, can be equal in number to the remainder. Also, since it has already been specified that there is only

"one additional counting element" it is unclear how "equal in number to any remainder left over" could further limit the number of counting elements.

Second, "as many . . . as possible" is considered to be vague and indefinite because it is not clearly defined by the claim and the term and/or specification does not suggest any standard definition. Therefore, one having ordinary skill in the art would not be reasonably apprised of the scope of the invention as claimed.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, 4, 5, 8, 9, 11-14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,557,548 to Gover et al.

Gover discloses a method for monitoring the occurrences of one or more events related to the operation of a processor (column 2, lines 1-3), the processor including a performance monitor having a plurality of counting elements (column 2, lines 4-7), the method comprising the steps of identifying the number of events to be counted by the performance monitor (column 3, lines 20-25 and column 4, lines 38-44), identifying the number of counting elements available to count incidents of the events (column 3, lines 26-31 and column 44-54), and assigning at least two of the counting elements to serially count incidences of at least one of the events (column

3, lines 56-63). Gover also discloses that the monitoring operation steps are controlled by a control element comprising a monitor mode control register and further that the counting elements each comprise a performance monitor counter (column 3, lines 6-17).

Gover also discloses determining a previous (i.e. historical) frequency of occurrence of incidences of the events to be counted (column 4, lines 7-17 and 35-40) and assigning the available counters to the events to be counted based upon the determined previous frequency (column 4, lines 40-44).

Gover also discloses carrying out the monitoring method in a system using a computer program, with corresponding instructions in a computer readable software medium (column 2, lines 11-15).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to

Applicant's disclosure:

U.S. Patent No. 6,233,531 to Klassen et al. teaches an apparatus and method for monitoring the performance of a microprocessor.

U.S. Patent No. 5,835,702 to Levine et al. teaches a performance monitor within a data processing system whereby a counting function to be performed by a particular counter is dependent upon a particular event programmed within another counter within the performance monitor.

U.S. Patent No. 5,949,971 to Levine et al. teaches a method and system for performance monitoring through identification of frequency and length of time of execution of serialization instructions in a processing system wherein a plurality of counters operate in a "history" mode.

U.S. Patent No. 5,537,541 to Wibecan teaches a system independent interface for performance counters.

Levine, "A programmer's view of performance monitoring in the PowerPC microprocessor" teaches the details and methods regarding the operation of performance monitors.

Roth et al., "POWERPC™ Performance Monitor Evolution" teaches the evolution of performance monitoring including components and operation.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw  
October 28, 2003

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800